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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,555	08/14/2001	James P. Janniello	YOR920010026US2	9835

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Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06430

EXAMINER	
REILLY, SEAN M	

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/929,555	JANNIELLO ET AL.	
	Examiner	Art Unit	
	Sean Reilly	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to Applicant's amendment and request for reconsideration filed on February 21, 2006. Claims 1-24 are presented for further examination. All independent claims have been amended.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 19-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

2. Claims 19-20 are not limited to tangible embodiments. In view of Applicant's disclosure, specification page 18, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., a recordable medium) and intangible embodiments (e.g., transmission medium). As such, the claims are not limited to statutory subject matter and are therefore non-statutory.

Applicant asserts that "Contrary to the Examiner's assertion, a transmission medium is a tangible entity, consisting of radio waves, light waves, electronic signals, etc" (Applicant response February 21, 2006 pg 7). Applicant cites the "Interim Guidelines for Examination of Patent Applications for Patent Subject Mater Eligibility" (signed October 2005) second to last ¶ on pg 57 to support this assertion. The second to last ¶ on pg 57 recites "On the other hand, from a technological standpoint, a signal encoded with functional descriptive material is similar to a computer-readable memory encoded with functional descriptive material, in that they both create

a functional interrelationship with a computer. In other words, a computer is able to execute encoded function, regardless of whether the format is a disk or a signal."

This paragraph merely acknowledges a technological standpoint. From a **legal standpoint**, as stated in the next paragraph of the guidelines, "a signal fails to fall within any of the four statutory classes of § 101" (see the guidelines pg 57 last ¶). Thus, "such signal claims are ineligible for patent protection" (pg 57 last ¶). These interim guidelines are the current policy of the Office and accordingly the rejection stands.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5-7, 11, 13-22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nations et al. (U.S. Patent Number 6,879,808; hereinafter Nations) and Humphrey (U.S. Patent Application Publication Number 2002/0129116).

4. With regard to claims 1, 17, and 19, Nations disclosed a method for selecting digital content for broadcast delivery to multiple users, said method comprising the steps of:

- identifying content of interest to multiple users (Col 10, lines 53-56); and
- broadcasting said content of interest to multiple users (Col 9, line 64 – Col 10, line 7) for storage in a client-side cache (Col 8, lines 52-58) wherein said broadcast of said

content is prioritized based on a hit rate of said content (e.g. sending the most requested web pages, Col 10, lines 1-8).

However, Nations failed to **specifically recite** that said hit rate is a ratio of a number of hits per unit of time. Nations system broadcasts the most requested web pages (see inter alia, Col 3, lines 47-54 or Col 9, line 64 – Col 10, line 7). Arguably *sending the most requested web pages* as recited by Nations requires calculating the number of page requests over some *time period* and thus meets the definition of Applicant's claimed hit ratio which is a ratio of a number of hits per unit of time. Rather than belabor this inherency argument Examiner has also cited the Humphrey system to show explicit evidence that it was widely known in the art at the time of Applicant's invention to determine the most requested web pages by calculating a ratio for a number of hits per unit of time. In an analogous system, Humphrey disclosed broadcasting web content for storage in a cache (see inter alia, ¶s 24 and 25). Like Nations system, Humphrey's system also prioritizes the content broadcast. In addition Humphrey's system determines the most requested content by calculating a hit ratio (rate of requests) that is based on the number of hits (requests) over a predetermined time period (see inter alia, ¶ 52). By prioritizing the content broadcast, Humphrey's system reduces the transport of replicated data and thereby reduces overall network congestion (¶ 25). Thus, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to broadcast content based on a ratio of a number of hits per unit of time, as disclosed by Humphrey, within Nation's system, since such a ratio is effective for determining the most popular content (Humphrey ¶ 52) and by broadcasting the most popular content the transport of replicated data is reduced which in turn reduces overall network congestion (Humphrey ¶ 25).

A similar rationale is utilized for the combination of Nations and Humphrey with regard to the other independent claims.

5. With regard to claim 5, Nations disclosed a method for selecting digital content for broadcast delivery to multiple users, said method comprising the steps of:

- specifying a server cache (e.g. a gateway cache, Figure 1, Component 17) size limit (Col 5, lines 3-10, required for storage in the cache);
- identifying content of interest to multiple users (Col 10, lines 53-56);
- limiting said content of interest to said server cache size limit (Col 5, lines 3-10, required for storage in the cache); and
- broadcasting said content of interest to multiple users for storage (Col 9, line 64 – Col 10, line 7) in a client-side cache (Col 8, lines 52-58) (Applicant's attention is drawn to the definition of a "local proxy server" Col 8, line 66- Col 9, line 5), wherein said broadcast of said content is prioritized based on a hit rate of said content (e.g. sending the most requested web pages, Col 10, lines 1-8) and wherein said hit rate is a ratio of a number of hits per unit of time; (request rate, Humphrey ¶ 52).

6. With regard to claims 11, 18, and 20, Nations disclosed a method for storing digital content in a client-side cache, said method comprising the steps of:

- receiving content broadcast from a central server (Col 9, line 64 – Col 10, line 7), wherein said broadcast of said content is prioritized based on a hit rate of said content (e.g. sending the most requested web pages, Col 10, lines 1-8);

- storing said received content in said client-side cache (Col 10, lines 56-65) if said content is of interest to a user (Col 10, lines 46-56);
- determining if requested content is in said client-side cache before requesting said content from a remote source (use of a cache, Col 9, lines 19-25) and wherein said hit rate is a ratio of a number of hits per unit of time; (request rate, Humphrey ¶ 52).

7. With regard to claims 2, 3, 6, 7, 12, and 13, Nations disclosed the step of identifying content of interest to multiple users further comprises the step of statistically analyzing recent user requests for content or the step of a user profile (Col 10, lines 53-56).

8. With regard to claim 14, Nations disclosed the step of requesting said content from an edge server (e.g. Gateway Figure 1) if said requested content is not in said client-side cache (Col 9, lines 19-25).

9. With regard to claim 15, Nations disclosed the step of requesting said content from a provider of said content if said requested content is not in said client-side cache (Col 10, lines 9-19).

10. With regard to claim 16, Nations disclosed the step of requesting said content from said remote source using a lower capacity link than a link that receives said content broadcast from a central server (Col 9, lines 6-18).

11. With regard to claims 21-22 and 24, Nations disclosed said broadcast of said content is based on one or more of the following: a refresh rate and a time of last broadcast, a state of a cache model, and a broadcast profile (e.g. sending the most requested web pages, Col 10, lines 1-8).

12. Claims 4, 8-10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nations et al. (U.S. Patent Number 6,879,808; hereinafter Nations) and Humphrey (U.S. Patent Application Publication Number 2002/0129116) and Sen et al. (U.S. Patent Number 6,691,312; hereinafter Sen).

13. With regard to claims 4 and 8, Nations and Humphrey disclosed a method for selecting digital content for broadcast delivery to a plurality of client-side caches, said method comprising the steps of:

- identifying content of interest to multiple users (Col 10, lines 53-56); and
- broadcasting said content of interest to said plurality of client-side caches (Col 9, line 64 – Col 10, line 7), wherein said broadcast of said content is prioritized based on a hit rate of said content (e.g. sending the most requested web pages, Col 10, lines 1-8) and wherein said hit rate is a ratio of a number of hits per unit of time; (request rate, Humphrey ¶ 52).

However Nations failed to specifically recite:

- specifying an estimated client-side cache size limit;
- broadcasting until said estimated client-side cache size limit is reached;
- waiting for a drain interval when said estimated client-side cache size limit is reached.

In an analogous art, Sen disclosed a system for broadcasting content to multiple users simultaneously based on a derived transmission schedule (Abstract). Sen determines an estimated client-side cache size limit (buffer size, Col 15-18) for use in developing an optimized (smoothed) broadcast schedule (Col 2, lines 4-12). The broadcast schedule in Sen's system,

broadcasts content to clients in intervals such that clients (node children) can appropriately drain (consume) content in the cache (i.e. broadcasting until the cache is full and then continuing after a time period – transmission variability) (see inter alia, Col 3, lines 29-48 and Col 8, Section A). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the broadcast transmission scheduling disclosed by Sen within Nations system, since the total transmission bandwidth requirements will be reduced (Sen Col 3, lines 44-48).

14. With regard to claims 9 and 10, Nations disclosed the step of identifying content of interest to multiple users further comprises the step of statistically analyzing recent user requests for content or the step of a user profile (Col 10, lines 53-56).

15. With regard to claim 23, claim 23 is rejected using a similar rationale as used with respect to claims 21-22 and 24.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nations et al. (U.S. Patent Number 6,879,808; hereinafter Nations) and Humphrey (U.S. Patent Application Publication Number 2002/0129116) and Shimomura et al. (U.S. Patent Number 6,526,580; hereinafter Shimomura).

17. With regard to claim 12, Nations fails to specifically recite storing said received content if said content is of interest to a user compares a category of said content to one or more categories selected by said user. Nevertheless storing content of interest to a user based on categories selected by a user was well known in the art, as evidenced by Shimomura. In an analogous art Shimomura disclosed a content broadcasting service where broadcasted content is stored

(cached) if the content matches a category (interest parameters) selected by the user (Col 4, lines 27-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the content storage system disclosed by Shimomura within Nations, in order to reduce communication and computer costs associated with serving large amounts multimedia content (Shimomura Col 2, lines 11-16).

Response to Arguments

18. In response to Applicant's request for reconsideration filed on 9/9/2005, the following factual arguments are noted:

a. Nations failed to teach the broadcast of content is prioritized based on a hit rate and *wherein the hit rate is a ratio of a number of hits per unit of time.*

In response to (a), Examiner respectfully disagrees with Applicant. Nations system broadcasts the most requested web pages (see inter alia, Col 3, lines 47-54 or Col 9, line 64 – Col 10, line 7). Arguably *sending the most requested web pages* as recited by Nations requires calculating the number of page requests over some *time period* and thus meets the definition of Applicant's claimed hit ratio which is a ratio of a number of hits per unit of time. Rather than belabor this inherency argument Examiner has also cited the Humphrey system to show explicit evidence that it was widely known in the art at the time of Applicant's invention to determine the most requested web pages by calculating a ratio for a number of hits per unit of time.

Conclusion

19. The prior art made of record, in PTO-892 form, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Reilly whose telephone number is 571-272-4228. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 8, 2006

KRISNA LIM
PRIMARY EXAMINER